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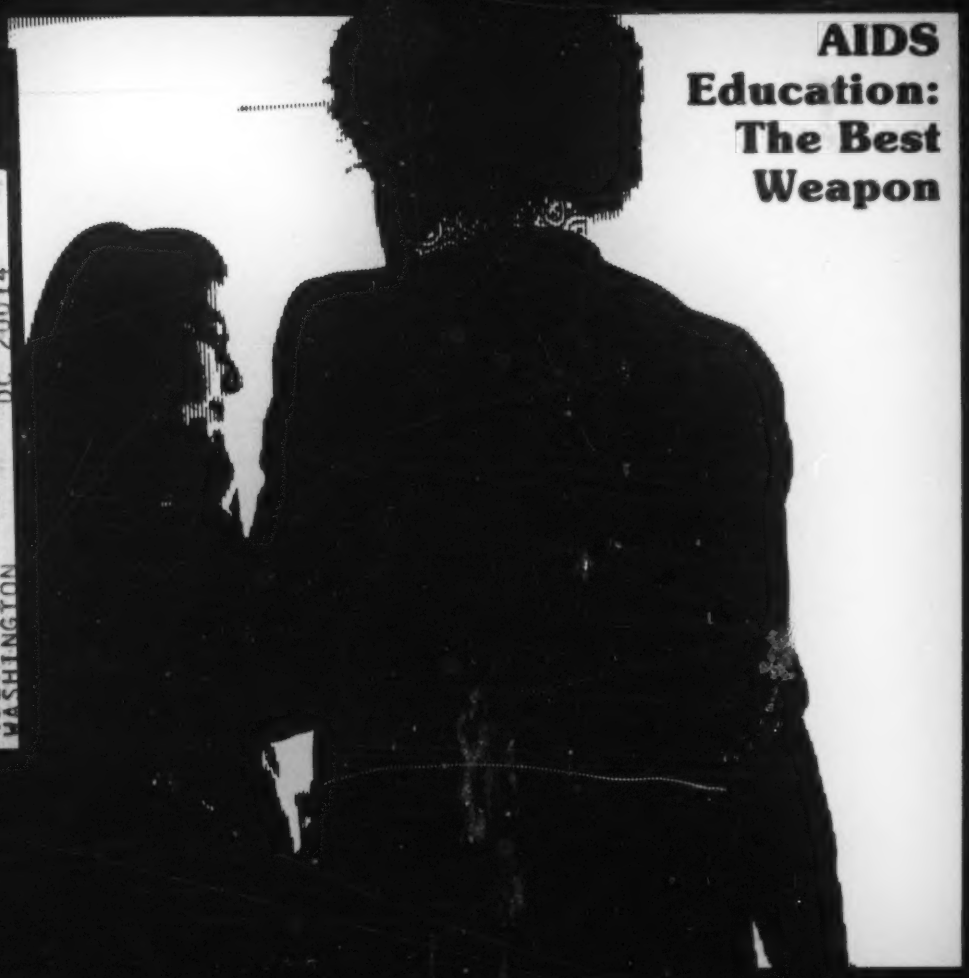

AIDS Education: The Best Weapon

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Nurses Call Out for AIDS Information

JACQUELYN H. FLASKERUD

Nurses are crucial combatants in the war against acquired immunodeficiency syndrome (AIDS). They care for, educate, and counsel AIDS patients and their families in a variety of settings. They also make referrals for, educate, and counsel at-risk populations, community groups, and other health care workers. In hospitals, nurses manage the control of infection as well as patients' physiological and psychosocial problems. In communities, they serve as case managers for persons with AIDS who live at home. They are involved in preventing AIDS through public health education, through counseling worried well persons and persons with human immunodeficiency virus (HIV) and AIDS-related complex (ARC), and through referring individuals to community resources for education, testing, and support.

In schools, nurses monitor students who have AIDS and oversee infection control procedures. They are involved in health education programs on the prevention of AIDS for students and for their parents. In psychiatric-mental health facilities, nurses assess clients for neuropsychiatric symptoms that could indicate AIDS, and they make referrals and provide psychotherapy and education to persons with AIDS and their families, to persons with HIV and with ARC, and to worried well individuals. Within their various specialties and work settings, nurses provide the entire gamut of nursing services and interventions as they deal with the spectrum of disorders caused by HIV. To provide this care, nurses must have a comprehensive knowledge of AIDS and of its treatments.

Jacquelyn H. Flaskerud, PhD, RN, FAAN, is an associate professor in the School of Nursing at the University of California, Los Angeles.

Educational Resources

Since the health care community first recognized AIDS, many professionals have addressed the topic in workshops, conferences, and continuing education and inservice programs for nurses and for other health care professionals. In addition, television and radio program planners and newspaper and magazine editors have put together many series on AIDS and have given almost daily attention to news about the disease.

Authors of books and articles for nurses have provided a substantial amount of information on AIDS and on the care of persons with AIDS. For nurses working in hospitals, authors have addressed symptom assessment, the care of patients in the acute phase of illness, precautions, transmission, psychological complications, and discharge planning [1-7]. Nurses working in communities have had access to books and articles that have addressed home care, occupational health care, and sexual counseling [8-11].

Nurses working in psychiatric-mental health facilities have had fewer resources available to them in the nursing literature [12-15]. Authors writing for related medical and health publications have addressed the neuropsychiatric and psychosocial care of persons with AIDS, their families and lovers, and the health care workers who care for them more extensively than authors in nursing have. Nurses working in schools have also had fewer resources to turn to, especially for the areas of their practice related to educating children and teenagers about sexually transmitted diseases. However, a good amount of the literature in related medical and health fields focuses on AIDS in children and during pregnancy [16-18].

Despite the substantial amount of literature on AIDS and the care of AIDS patients, some researchers have un-

covered evidence that nurses' knowledge is inadequate and inaccurate and leads to less-than-optimal care. In January 1986, the Veterans Administration Medical Center in Washington, D.C. and the National Institutes of Health surveyed 1,194 employees of a large urban hospital in Washington, D.C. to determine their knowledge of AIDS. The researchers found that 50 percent of the respondents believed that AIDS could be spread through casual contact; 20 percent believed that it could be spread via coughing and sneezing; more than 50 percent said they would wear gowns and masks when caring for AIDS patients; 49 percent said they spent less time with AIDS patients than with their other patients; and 35 percent reported actively avoiding patients with AIDS [19].

In a study of 1,019 hospital staff nurses in California, researchers determined other areas of knowledge deficit about AIDS as well as negative attitudes toward persons with AIDS that could affect the nurses' practice [20]. They found that the nurses lacked knowledge of how to correctly distinguish AIDS symptoms and of how to determine which individuals are at high risk for AIDS, that they used overly cautious isolation techniques, and that they believed that they were at high risk for contracting AIDS at work. Twenty-three percent of the nurses said they would not care for patients with AIDS; 54 percent said that nurses should be allowed to refuse to care for patients who have or who are suspected of having AIDS. Nurses who recently had cared for patients with or at risk of contracting HIV and those who had attended lectures and educational forums on AIDS were more likely to know the symptoms of the disease, who is at risk for contracting it, and what precautions to take to prevent transmission. They were also more willing to care for patients with AIDS.

Researchers who recently conducted a survey of 1,000 California physicians reported similar findings about physicians' knowledge and attitudes [21]. Their study revealed that a majority of the physicians had inadequate knowledge of the symptoms of ARC and of how to determine which groups are at risk, and that their practices in taking sexual histories and in making differential diagnoses were inadequate. A third of the respondents reported from moderate to great discomfort with homosexual patients. The researchers considered these the factors most associated with physician competence: working with patients with or at risk for AIDS, a low level of discomfort when treating homosexuals, attendance at lectures on AIDS, being young, specializing in internal medicine, and not working in a solo practice.

Investigators in New York City, San Diego, and San Francisco have assessed homophobia among physicians and nurses [22-24]. Using the Index of Homophobia scale, they found low-grade homophobia among the respondents. The physicians and nurses who had gay friends or relatives were much more likely to report positive attitudes toward homosexuals. About 10 percent of the respondents said they believed that persons with AIDS were "getting what they deserve."

Most researchers have found, though, that health care workers who have accurate knowledge about AIDS and who have experience working with persons with or at risk of AIDS have lower levels of fear and anxiety than do other workers, are more willing than others to work with AIDS patients, and exhibit appropriate professional behavior toward AIDS patients [25,26]. The requirement that nurses know about and understand AIDS, the nursing literature on AIDS and on the care of AIDS patients, and the research on nurses' knowledge and attitudes all attest to the fact that nurses need information on AIDS to give safe and sensitive care and to educate the public. Nurses themselves have recognized this and have pinpointed specific needs for AIDS information.

Information Needs

From August 1986 through March 1987, I conducted a national survey of 832 nurses to determine nurses' needs for AIDS information and to develop educational resources to meet those needs. I drew a random sample of nurses from the membership lists of the American Nurses' Association's Councils on Community Health Nursing, Medical-Surgical Nursing, and Psychiatric-Mental Health Nursing, and from the National Association of School Nurses. The sample consisted of 194 medical-surgical (MS) nurses, 194 community health (CH) nurses, 233 psychiatric-mental health nurses (PMH), and 211 school nurses (SCH). The response rate was 66.2 percent—60.8 percent of the MS nurses, 68 percent of the CH nurses, 77.2 percent of the PMH nurses, and 60.8 percent of the SCH nurses responded.

The responding nurses represented 48 states and the District of Columbia. Forty-one percent of the respondents were from California, Florida, New Jersey, New York, and Texas—states that, together, account for about 72 percent of the AIDS cases reported in the United States. Nurses who lived in Standard Metropolitan Statistical Areas (SMSAs)—areas with populations of 100,000 or more—made up 64.3 percent of the sample. Among those who lived in non-SMSAs, 24.5 percent lived in towns with 15,000 or fewer people. Chi square analysis indicated that there were no statistical differences among the groups in terms of type of residence area.

The nurses ranged in age from 22 to 72 years, with a mean of 44.3 years and a median of 44 years. Although differences among the groups in terms of mean ages were not statistically significant, medical-surgical nurses were the youngest group—69.5 percent of them were from 22 to 44 years of age—and school nurses were the oldest group—69.8 percent of them were from 45 to 72 years of age. The sample was 97 percent female.

The respondents were well-educated—93.7 percent of them had bachelor's or higher degrees in nursing. There were significant differences among groups in terms of education levels: 51.3 percent of the CH nurses and 65.7 percent of the PMH nurses had master's degrees; 64.3 percent of the SCH nurses had bachelor's degrees; and 50.9 percent of the MS nurses had bachelor's, diploma, or associate degrees.

Twenty-three percent of the nurses worked in schools; 24 percent in hospitals; 18 percent in community health facilities; 22 percent in schools of nursing; and 11 percent in community-mental health facilities. Sixty-five percent of the MS nurses and 25 percent of the PMH nurses worked in inpatient settings. Ninety-eight percent of the SCH nurses, 63 percent of the CH nurses, and 45 percent of the PMH nurses worked in outpatient settings.

About 27 percent of CH, MS, and PMH nurses worked in schools of nursing. Nurses who worked in inpatient facilities were significantly younger and less educated than the nurses who worked in outpatient settings or schools of nursing, and they had worked at their present jobs for fewer years. Overall, the nurses had practiced their present occupations for from 1 to 47 years with a mean of 12 years and a median of 10 years. SCH nurses had practiced at their present occupations longest—61 percent had been doing so for more than 10 years. About 50 percent of the MS, PMH, and CH nurses had practiced their present occupations for more than 10 years.

I first asked the respondents to rate the likelihood that they would see a patient with AIDS in their work settings during the next six months. Fifty-one percent considered it likely. The groups differed significantly on this variable. Only 18 percent of the SCH nurses thought they were likely to see an AIDS patient. About 60 percent of the CH and PMH nurses and 68 percent of the MS nurses considered it likely that they would see a patient with AIDS in the next six months. Nurses who were less educated, younger, and working in hospitals considered it more likely that they would see a patient with AIDS than those who were more educated, older, and working in other settings. The respondents' determinations of the probability of seeing a patient with AIDS were not related significantly to residence in an SMSA versus a non-SMSA. I also asked the nurses to indicate whether they needed information in a number of categories related to AIDS and HIV infection (see Table 1).

Seventy-five percent or more of the respondents indicated needing information in 56 percent of the categories I asked about. Although, for many of the categories, there were significant differences among groups that could be related to their specialties, some informational needs were apparent in all groups. Eighty percent or more of the respondents indicated the need for information in the areas of AIDS symptom assessment, transmission in the workplace, precautions for health care workers, psychosocial care, and legal and ethical issues.

The respondents' information needs were significantly related to whether

Table 1. Percent of Respondents Indicating Need for Information (N=832)

	Total N=832	MS N=194	CH N=194	PMH N=233	SCH N=211
Case definition:	%	%	%	%	%
AIDS	74	81	75	69	74
ARC*	72	78	75	64	73
Pediatric AIDS*	60	43	69	44	84
HIV positives*	75	82	77	68	77
Case reporting:					
Adult AIDS*	62	72	73	58	45
Pediatric AIDS*	52	43	65	36	68
HIV positives*	65	74	76	58	55
At-risk groups:					
Homosexual/bisexual males*	60	59	69	68	42
IV drug abusers*	57	64	64	58	41
Blood recipients/ hemophiliacs*	60	69	64	47	60
Prostitutes*	48	50	63	51	25
Sexual partners of above*	62	66	70	71	39
AIDS symptom assessment	80	93	80	73	76
Transmission in the workplace	80	85	79	76	78
Precautions:					
Nurses/health care workers (HCWs)	87	91	90	82	86
Household contacts*	78	86	85	73	69
Minimizing infection*	76	85	81	72	67
Prevention	86	88	87	84	86
Safe sexual practices*	76	73	80	83	66
Psychosocial care:					
AIDs patients*	80	89	83	82	65
Families of patients*	80	88	84	86	66
Nurses/HCWs*	81	87	84	86	66
Neuropsychiatric syndromes*	76	83	75	86	60
Legal and ethical aspects:					
Rights of HCWs*	83	89	87	78	78
Rights of AIDS patients*	80	85	87	76	73
Ethical issues*	83	93	86	82	73
Confidentiality/ privacy	78	76	81	81	73
Resources/services available to patients and families:					
Home health nursing*	70	80	75	67	57
Community medical	72	79	75	68	70
University medical	62	63	65	58	61
Referral centers	75	79	78	71	72
AIDS hotlines	65	66	72	61	56
Financial assistance*	63	66	72	61	56
HIV testing sites	64	69	67	62	56

**Significant differences among groups ($P \leq .05$)*

they thought they'd see a patient with AIDS in the next six months in all but four of the information categories listed in Table I—case definition: pediatric AIDS; case reporting: pediatric AIDS; prevention; and confidentiality/privacy. Education level was significantly related to the need for information about the case definition of pediatric AIDS, about all of the at-risk groups and their sexual partners, about AIDS symptom assessment; about safe sexual practices; about the legal and civil rights of health care workers and AIDS patients, and about university medical centers and referral centers. In all cases, nurses with lower education levels needed more information than did nurses with higher education levels.

Age was also significantly related to information needs in several categories. Respondents who were younger had more need than those who were older for information about reporting cases of adults with AIDS and of individuals who test positive for HIV, about intravenous drug abusers, prostitutes, and sexual partners of at-risk persons, about safe sexual practices, about precautions for household contacts, and about home health nursing, university medical centers, and referral centers.

I next asked the nurses to indicate the groups they were likely to help by means of AIDS education, counseling, and referrals (see Table 2). Helping such groups assumes that nurses themselves have the information, knowledge, and skills to do so.

The respondents indicated that they were providing education, counseling, and referral help to all of the groups I asked about. Significant differences among the responding groups were probably related to their specialities and work settings. All four groups of nurses provided assistance to their fellow workers as well as to persons they came in contact with in their employment settings. The groups who were receiving the least assistance were prostitutes and their families, police officers, and firefighters. The groups who were receiving information from all of the nursing specialty groups were other nurses, nursing assistants, and social workers/psychologists.

Whether the nurses provided help to the various groups was significantly related to the probability of their seeing a patient with AIDS in their work setting during the next six months in all but five categories—school-age children and their parents, teenagers and their parents, and maintenance workers. Whether the respondents provided assistance through education, counseling, and referral was also significantly related to education level, age, and occupational setting. Nurses who were less educated, younger, and working in inpatient settings were more likely to indicate that they were helping various groups than were nurses who were more educated, older, and working in other settings. Education level, age, and occupational setting were related to helping all of the at-risk groups and their families, all of the community groups except police officers and fire fighters, and more of the health care worker groups.

In some categories, providing assistance through education, counseling, and referrals was related significantly to the type of residence area in which respondents lived. Nurses in non-SMSAs were more likely than nurses in SMSAs to educate, counsel, and make referrals for teachers, prin-

Table 2. Percent of Respondents Indicating Likelihood of Assisting these Groups (N=832)

	Total N=832	MS N=194	CH N=194	PMH N=233	SCH N=211
At-risk groups:	%	%	%	%	%
Homosexually/ bisexually active males*	46	44	50	65	20
– families of*	55	56	63	62	40
– partners of*	46	44	56	61	20
IV drug abusers*	41	44	46	53	18
– families of*	48	48	55	54	34
– partners of*	40	37	49	53	17
Prostitutes*	23	18	34	33	5
– families of*	26	25	32	31	16
– partners of*	26	22	37	36	10
Blood recipients/ hemophiliacs*	57	74	58	32	66
– families of*	58	70	61	34	69
– partners of*	38	52	48	32	22
Community groups:					
School age children*	44	26	47	22	84
– parents of*	56	36	62	36	89
Teenagers*	52	35	59	44	80
– parents of*	58	45	58	49	79
Teachers, principals*	54	32	57	31	94
Teaching assistants*	48	29	48	24	91
Police*	30	37	42	24	17
Firefighters*	26	33	38	22	15
Health care workers (HCWs):					
Other nurses*	77	87	82	79	62
Nursing assistants*	76	86	81	77	62
Social workers/ psychologists*	69	59	71	70	74
Hospice workers*	39	46	61	36	15
Home health aides*	40	40	70	35	16
Families/partners of HCWs*	50	51	67	48	36
Clerical workers*	58	56	63	50	66
Food service workers*	47	48	42	34	68
Maintenance workers*	46	48	36	33	70

**Significant differences among groups ($P \leq .05$)*

cipals, and teaching assistants, teenagers, and the families of prostitutes and drug abusers. When I examined specialty groups individually, I found the same pattern. If residence area was related to providing assistance, nurses in non-SMSAs were more likely to indicate that they were helping various groups.

Finally, I asked the nurses to indicate the resources they use or prefer for obtaining information about AIDS (see Table 3). All of the nurses clearly preferred continuing or inservice education, professional journals, newspapers and magazines, and television and radio. Significant differences were most obvious in the use of specialty nursing journals. The probability of seeing a patient with AIDS in the next six months was significantly related to the use of resources. The nurses who thought it was likely that they would see a person with AIDS were more likely to use all of the professional resources listed than were those who did not expect to see an AIDS patients. Area of residence, education, and occupational setting were also significantly related to resource use. Nurses living in SMSAs were more likely than those living in non-SMSAs to use *The American Nurse,* local public health newsletters, and reports from the Centers for Disease Control (CDC). Those educated at lower levels used continuing education resources and those at higher levels used journals and *The American Nurse.* Nurses who worked in schools of nursing were more likely to use journals and *The American Nurse,* and nurses who worked in outpatient settings were more likely to use local public health newsletters.

Table 3. Percent Indicating Use of Information Sources (N=832)

	Total N=832 %	MS N=194 %	CH N=194 %	PMH N=233 %	SCH N=211 %
Continuing/inservice education*	87	89	83	81	95
*American Journal of Nursing**	80	87	86	77	72
*Journal of Community Health Nursing**	38	19	74	27	32
*Journal of Psychosocial Nursing**	40	18	28	86	14
*Journal of School Health**	36	8	33	11	89
*Nursing '87**	62	83	62	47	57
*The American Nurse**	49	61	57	60	15
CDC Reports (MMWR)*	42	32	60	32	49
AIDS Nursing Update newsletter	43	39	41	43	50
Local public health newsletters*	27	16	19	14	58
Newspapers/magazines*	87	83	84	89	91
TV/radio	84	81	80	86	81

**Significant differences among groups (P ≤ .05)*

Relationships among Categories

I used the Pearson product moment correlation coefficient to examine relationships among the categories of AIDS information needs, groups that nurses were likely to assist through education, counseling, and referral, and preferred information resources. Many correlations were not statistically significant; many others were only weakly significant. Significant low-moderate direct correlations occurred infrequently between information needs and groups helped where they might be expected to occur. The need for information about the case definition of pediatric AIDS correlated with assisting school children, teenagers, parents, teachers, and principals. The need for information about various at-risk groups, psychosocial care, assessment of neuropsychiatric complications, and community resources correlated with helping at-risk groups. The need for information about precautions in the workplace, ethical and legal issues, and community resources were related to assisting other nurses and health care workers. Finally, the need for information about legal and ethical issues correlated with the use of continuing education as an information resource.

Discussion

The responding nurses' information needs differed according to their specialties and work settings. However, the most striking aspect of the findings was that more than 70 percent of nurses in all specialty groups indicated a need for information in areas that are directly related to their practices. These areas were AIDS symptom assessment, transmission in the workplace, precautions for health care workers, psychosocial care of patients, and legal and ethical issues for patients and health care workers. Nurses must be knowledgeable in these areas to provide care for AIDS patients and to protect themselves.

Again, based on their specialties and work settings, the nurses indicated that they were providing assistance through education, counseling, and referrals to the various at-risk groups, community groups, and health care worker groups. All of the specialties were most likely to help other nurses and health care workers. Finally, the respondents indicated using both professional and popular educational resources to obtain AIDS information. All four groups of nurses agreed on the use of continuing education programs, journals, newspapers and magazines, and television and radio as resources.

The most consistent study finding was that the need for information was significantly related to the likelihood of seeing a patient with AIDS in the work setting. Nurses who thought they were likely to see a patient with AIDS felt a greater need for information, were more likely to help various groups, and used more resources than did nurses who did not think they were likely to see a patient with AIDS. In addition to indicating a greater need for information, the nurses who expected to see AIDS patients were younger, less educated, and more likely to work in a hospital than were the nurses who did not expect to see AIDS patients.

Since 51 percent of the nurses ex-

pected to see AIDS patients and since an even larger majority indicated needing AIDS information directly related to their practices, educators, employers, and professional organizations and journals must strive to provide this information.

Reading and hearing information about AIDS alone will not change attitudes and practice. Repetitive learning and demonstrations are also necessary to keep skills up-to-date.

Eighty-seven percent of the respondents preferred to obtain the information they need via continuing and inservice education programs. To keep nurses' knowledge up-to-date, employers and educators can regularly offer AIDS inservice programs to address the areas of need the nurses pinpointed. To encourage attendance, the programs should be offered during working hours and should include continuing education credit. Employers and educators should keep in mind nurses' preferences for television and radio as information resources as they plan education programs. Lewis and his colleagues found that mass communications greatly affected physicians' knowledge about AIDS [27]. Using audiovisual media and persons with AIDS and their families as speakers can add impact to the information.

Other suggestions for sound educational programs come from previous research and experience with continuing health education. Researchers who have studied nurses' and physicians' knowledge of AIDS have suggested that, in addition to reading and listening to information about AIDS, nurses and physicians need hands-on experience if they are to overcome fears and negative attitudes and incorporate knowledge about AIDS into their practices [28,29]. These investigators suggest that reading and hearing information about AIDS alone will not change attitudes and practice, and that knowledge that is not used is soon forgotten. Experience with training individuals to carry out cardiopulmonary resuscitation (CPR) suggests that repetitive learning and demonstrations are necessary to keep skills up-to-date.

These recommendations may explain in part why the nurses I surveyed indicated needing AIDS information that has been addressed comprehensively in the nursing and related health literature and through nursing workshops and conferences. Articles in nursing journals have addressed AIDS symptom assessment, hospital and home care for patients with AIDS, transmission in the workplace, and precautions for health care workers. Despite this, nurses continue to ask for more of the same information. To be responsive to nurses' needs and learning behaviors, nursing journals should continue to provide information about AIDS regularly and repetitively.

The respondents to my survey also indicated needing information about the psychosocial and legal and ethical aspects of AIDS. Although most articles on AIDS in nursing journals include brief sections on psychosocial and legal and ethical concerns, the nursing literature has not addressed these topics as extensively as the allied health literature has. Nursing publications also have not addressed comprehensively the assessment and recognition of neuropsychiatric symptoms of persons with AIDS.

Finally, if nurses are to have an impact on stemming the AIDS epidemic, they will have to focus much of their practice on prevention. For this to occur, nurses need knowledge and practice in sexual history-taking and counseling and in drug-abuse history-taking and counseling. Nurses are neither skilled nor comfortable in these areas at this time. Nursing journals and inservice and continuing education programs should focus on these areas regularly and comprehensively. Employers and educators can also provide clinical practice experience in these areas. A combination of these various learning experiences can give nurses AIDS-related skills and knowledge they can retain and apply to their practices. In the end, everyone AIDS touches will benefit.

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